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Note from the Astronomer Royal to the Editor.

"In the last number of the *Monthly Notices* there is an account of the occultation of *Saturn* on May 8, as observed at Wimbledon by Mr. Pollock. I do not doubt the perfect accuracy of the description; but I do not clearly understand the tenor of the remarks which follow it.

"The phenomena of diffraction are produced as distinctly by the lens of the eye as by the object-glass of a telescope. They are, however, enormously increased by the want of accurate definition in the eye. Very few eyes (especially among those accustomed to look at near objects), perhaps none, see the moon without an enlargement of its diameter to the extent of several minutes of arc. This will easily be perceived upon examining, with the naked eye, the moon at the latest period at which the obscure disk is visible, or 'the young moon with the old moon in her arms,' when it will be seen that the apparent limb of the bright surface belongs to a much larger circle than that of the dark surface. I need not say that this entirely explains the appearance of projection.

"The irradiation of the planet has no part in producing the appearance of projection.

"The expression, 'projection of a fixed star upon the moon's disk after it should have disappeared behind it,' refers to some supposition with which I am not acquainted. The disappearance occurs, I conceive, exactly at the time at which it ought to occur, but the image of the moon's limb expands at that time so as to cover that of the planet; in the case of view with a telescope adjusted to focus, in consequence of diffraction; and in the case of view with the unarmed eye, in consequence principally of the imperfect definition by the eye.

"*Royal Observatory, Greenwich, Oct.* 4, 1859."

List of Star-Magnitudes not included in Baily's edition of Lalande's Histoire Céleste. By M. Hencke.

(*Extract of a Letter to the Astronomer Royal.*)

"Will you kindly permit me to annex a list of star-magnitudes, not given in Baily's Lalande's Catalogue: should these deficiencies already be supplied, and I thus come too late, still I hope that my list may not be quite superfluous, as the estimation of magnitude by a second person may be useful in doubtful instances. In any case, will you kindly accept the intention for the deed? Willingly would I annex, besides, a list of the many errors (nearly 3000) contained in that Catalogue, which I discovered in the course of making my Charts (segments of a 14-foot sphere), but with that also I shall, perhaps, come too late: moreover, this catalogue of faults might itself be still faulty, as I have been guided by eye-estimation only. At all events, I shall expect your kind command. A similar catalogue, referring to the Star-Charts of the Berlin Academy, stands equally at your service.

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List of Star-Magnitudes which remain for insertion in Baily's Edition of Lalande's Histoire Céleste.

The sign of μ affixed to the Magnitudes signifies a half.

No.	Mag.	No.	Mag.	No.	Mag.	No.	Mag.
16	8	3321	8	5364	9	7412	8
30	8 μ	3343	8	5531	7 μ	7415	8 μ
99	8	3347	8 μ	5601	7 μ	7511	8
102	9	3363	8 μ	5674	8	7523	8
248	8	3575	9	5680	8	7561	7 μ
373	7 μ	3605	8 μ	5711	8 μ	7586	9
482	8	3610	8 μ	5767	9	7608	9
507	8 μ	3638	9	5813	8 μ	7630	8
664	8	3655	6	5876	7	7631	8 μ
740	8 μ	3709	8	5893	6 μ	7683	7 μ
910	8	3720	8	5911	8	7729	8
936	9	3838	9	6013	8 μ	7773	8 μ
982	8	3920	8	6027	8 μ	7782	9
1021	8 μ	4014	7 μ	6169	8	7919	8 μ
1250	7 μ	4036	8	6183	9	7959	8
1303	8 μ	4103	7	6220	9	7962	8
1386	8 μ	4121	8	6269	8 μ	7996	8 μ
1429	9	4123	7 μ	6281	8 μ	8012	8
1725	8	4124	9	6335	7	8062	8
1758	9	4131	7 μ	6368	7	8226	7 μ
1759	7 μ	4259	7 μ	6502	8	8235	8
1886	7 μ	4269	8 μ	6531	6	8263	8 μ
Pos. incorrect.		4238	7	6560	8	8301	7
1952	8	4391	7 μ	6576	8 μ	8306	8
1974	8	4465	8	6601	8 μ	8366	7 μ
1977	8 μ	4478	8	6644	8	8379	7 μ
2219	7	4508	7	6686	7	8411	6
2562	8 μ	4541	7	6754	9	8451	7
2586	8	4589	7	6866	8 μ	8505	7 μ
2691	8	4606	7 μ	6880	9	8615	7 μ
2717	8	4674	7 μ	6922	8	8657	7 μ
2778	8	4678	8	6925	8 μ	8699	7 μ
2814	7 μ	4700	7 μ	6935	7 μ	8733	8
2839	7 μ	4736	8	6989	6 μ	8735	7 μ
2863	8 μ	4748	8 μ	7082	9	8806	7 μ
2995	7 μ	4793	7 μ	7164	7	8814	8
3042	8	4795	9	7266	6	9090	8 μ
3064	8	4872	8	7309	8	9172	7 μ
3126	7 μ	4888	9	7310	9	9253	8
3167	8	4904	8 μ	7401	8	9366	8 μ
3182	8	5114	7 μ	7410	8	9367	8

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No.	Mag.	No.	Mag.	No.	Mag.	No.	Mag.
9379	8	10611	8	13259	8	16734	8 μ
9388	8	10614	8	13338	8 μ	16776	8 μ
9392	8	10623	8	13378	8	16877	7 μ
9400	8 μ	10633	8 μ	13554	7 μ	16888	8 μ
9408	8	10759	8	13557	8 μ	17028	7 μ
9437	7	10866	8	13564	9	17172	8 μ
9493	7	10884	8	13695	6	17175	7
9584	8 μ	10891	8	13758	8 μ	17254	8
9623	8	10892	8	13812	7 μ	17720	8 μ
9626	8 μ	10921	8	13914	8 μ	17724	8
9638	8 μ	10933	4	13972	8 μ	17936	8 μ
9670	8	10975	7 μ	14031	8	17949	8
9687	8	11081	8 μ	14039	9	17969	8
9694	8 μ	11106	8 μ	14088	6	17998	8 μ
9715	9	11146	7	14099	7 μ	18215	8
9720	8 μ	11258	8	14112	8 μ	18230	8 μ
9721	8	11285	9	14295	8	18453	7 μ
9728	8	11288	7	14405	8	18681	8 μ
9754	7	11342	8	14412	9	18942	8 μ
9772	8 μ	11926	8	14415	8	19019	8
9797	8	12074	6	14421	8	19284	8
9805	7 μ	12151	8	14427	8	19486	8
9874	8	12194	8 μ	14431	7 μ	19566	8
9888	8 μ	12280	7 μ	14464	7	19649	8
9911	9	12319	8 μ	14563	8 μ	19655	8 μ
9977	8 μ	12389	8	14641	9	19698	8
10039	9	12399	8 μ	14830	8	19712	8
10099	8	12430	6 μ	14969	8 μ	19799	8 μ
10129	8 μ	12437	7 μ	15070	7 μ	19853	8
10189	8 μ	12453	6 μ	15134	8 μ	19869	7 μ
10205	8	12502	8 μ	15218	8	20363	8 μ
10264	6	12503	7 μ	15286	7	20400	6
10277	8	12504	7 μ	15330	8	var. 20592	9 μ
10306	9	12625	8 μ	15331	7	20624	8 μ
10309	6	12657	8	15447	8 μ	20764	7 μ
10318	8	12764	8	15571	8 μ	20771	7 μ
10327	8 μ	12775	9	15589	8 μ	20778	8 μ
10332	7 μ	12822	8 μ	15657	6 μ	20781	8 μ
10389	8	12960	8	15699	9	20819	8 μ
10399	7 μ	13031	8	16199	9	20886	8
10492	7 μ	13088	4	16356	7 μ	20968	8 μ
10497	8	13128	7 μ	16545	8 μ	21044	9
10566	8 μ	13205	7	16550	9	21056	9
10584	8	13207	8 μ	16571	7 μ	21146	8

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No.	Mag.	No.	Mag.	No.	Mag.	No.	Mag.
21256	8 μ	23352	8	25786	8 μ	28069	8 μ
21266	7 μ	23356	8 μ	25822	9	28305	9
21313	8 μ	23372	9	26011	8 μ	28339	8 μ
21374	8 μ	23386	8 μ	26065	8	28375	8 μ
21425	8 μ	23614	8 μ	26141	8	28408	9 μ
21688	6 μ	23665	8 μ	26227	8	28416	9
21698	7 μ	23699	7 μ	26251	7	28436	7
21746	8 μ	23705	9	26425	8	28446	7 μ
21752	9	23737	8	26437	9	28460	6
21889	9	{ 23762	8 μ }	26481	8	28565	8
21846	7 μ	{ Pos. incorrect. }		26468	7	28468	6
21957	8 μ	23926	7	26727	8	28608	6
22001	8 μ	23941	8 μ	26729	9	28683	9
22089	8 μ	23966	8 μ	26736	7 μ	28743	8
22117	8 μ	23969	8	26765	7 μ	28767	8
22154	8 μ	24046	8 μ	26788	8	28774	8
22255	9	24352	9	26992	7	28964	8
22259	8	24410	8 μ	27040	8	28976	7 μ
22282	8	24414	7 μ	27120	7 μ	29063	8
22303	8 μ	24426	8 μ	27138	6 μ	29171	8 μ
22357	7	24438	8 μ	27146	8	29203	8
22386	8	24473	9	27176	7 μ	29411	8
22456	9	24474	9	27182	5	29487	8
22479	8 μ	24505	7	27186	9	29495	7 μ
22482	8 μ	24549	9	27235	8 μ	29505	8
22496	7 μ	24638	8 μ	27267	8	29510	7
22510	9	24688	8	25286	8	29520	8
22520	6 μ	24698	9	27348	9	29683	6
22525	6 μ	24729	8	27373	8 μ	27775	8
22527	6	24747	7	27505	8	29798	7 μ
22536	7 μ	24789	8	27518	7 μ	29826	8
22575	7 μ	24932	8	27557	8 μ	29841	7 μ
22602	8	24981	8 μ	27588	8	29866	8
22619	8 μ	24997	8	27653	9	29898	8
22640	8	25136	6	27676	9	29935	6
22669	9	25234	8	27679	8	30034	8
22688	8 μ	25303	8	27831	8 μ	30054	9 μ
22801	7 μ	25347	7 μ	27873	8 μ	30089	8
22901	8	25354	8 μ	27906	9	30120	8 μ
22931	8 μ	25469	8	27927	6	30156	9
22942	7	25483	7	27955	8 μ	30411	9
23161	9	25492	9	27961	8	30457	7 μ
23166	9	25542	6	27984	8	30513	6 μ
23306	8	25560	8 μ	28027	7 μ	30522	9

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No.	Mag.	No.	Mag.	No.	Mag.	No.	Mag.
30659	8	32801		34537	9	35403	8
30679	7 μ	32840	8 μ	34538	7	35409	9
30721	7	32891	8 μ	34570	7 μ	35442	8
30783	8 μ	32930	8	34578	8 μ	35443	8
30977	9	32946	6	34581	7	35456	8
31085	9	32971	7 μ	34628	6 μ	35520	8 μ
31131	9	33011	8 μ	34689	7 μ	35539	8 μ
31136	7	33065	8 μ	34693	7 μ	35566	7 μ
31138	8	33143	8 μ	34769	8	35614	8
31144	8 μ	33162	7 μ	34819	8 μ	35615	8
31155	9	33233	8 μ	34845	8 μ	35616	8
31162	7	33243	8	34846	8 μ	35648	8
31186	9	33254	7	34847	8 μ	35656	8
31191	3	33284	8	34860	7 μ	35666	6
31237	9	33307	8	34862	7	35696	8
31241	7	33312	8	34882	{8 μ}	35704	8 μ
31254	8 μ	33402	5 μ		{5}	35827	8
31277	9	33505	7	34905	8	35828	8
31292	7	33534	8	34915	6	35829	8
31397	9	33542	9	34933	7 μ	35870	6 μ
31491	8	33591	8 μ	34935	8	35878	8
31498	7 μ	33637	8 μ	33945	8	35910	8 μ
31503	8	33683	7 μ	34954	8 μ	35990	9 μ
		33704	7 μ	34955	7	36039	8 μ
31544	Neb.	33720	8	35028	6 μ	36071	8
31682	7 μ	33758	7	35067	7 μ	36072	8
31686	8	33759	7	35105	7 μ	36073	8
31838	8	33762	7	35109	8 μ	36095	8 μ
31856	9	33849	9	35119	7 μ	36141	8 μ
31881	8	33907	6	35120	7 μ	36142	6
31890	8	33968	9	35121	7 μ	36223	8 μ
31943	7 μ	34026	8	35154	7	36257	6
31948	7	34041	6 μ	35155	7 μ	36268	6
32024	7	34043	6 μ	35176	8	36331	8
32096	6	34155	9	35181	8	36339	9
32256	7 μ	34209	6 μ	35199	8 μ	36347	7
32322	8	34210	6 μ	35225	7	36355	8 μ
32449	7 μ	34290	8 μ	35230	7	36427	8 μ
32580	8	34346	9	35288	8	36473	6
32607	8	34417	7 μ	35306	8	36598	7 μ
32647	7	34432	7 μ	35307	8	{36674	6}
32699	8 μ	34448	8	35308	8	{Position incor.}	
32743	8 μ	34500	8	35318	8	36701	8 μ
32780	8 μ	34507	9	35334	4 μ	36710	7 μ

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No.	Mag.	No.	Mag.	No.	Mag.	No.	Mag.
36712	7	38444	8	39830	8	41294	8 μ
36781	7	38515	7	39925	8	41410	8 μ
36833	7	38560	8	39927	8 μ	41430	8 μ
36855	8 μ	38666	8 μ	39944	8	41482	7
36858	8 μ	38667	9 μ	39960	8 μ	41553	8
36875	8 μ	38689	8 μ			41630	8
36911	8	38692	6	39988	8 μ	41631	8
37064	6 μ	38739	9	40091	8 μ	41654	8 μ
37090	8 μ	38740	8	40103	7 μ	41678	8
37116	8 μ	38755	9	40108	9	41682	9 μ
37126	7 μ	38768	9	40167	8	41771	9
37138	8 μ	38782	8	40295	8	41815	Neb.
37144	8	38794	8 μ	40373	7	41816	Neb.
37176	8	38814	7	40538	7	41827	8 μ
37285	8	38927	8	40574	7	41855	8 μ
37311	7 μ	38937	7 μ	40662	8 μ	41858	8 μ
37320	8	38944	7 μ	49675	6	41927	8
37382	8 μ	38969	8	40679	6	41928	Neb.
37430	8 μ	38975	9	40686	9	41931	9
37448	7	38986	7 μ	40773	7	41939	9
37490	9	39016	9	40779	8 μ	41944	8 μ
37640	8 μ	39062	9	40785	7	42025	8 μ
37656	8 μ	39081	9	40796	8 μ	42049	8 μ
37684	8	39110	7	40800	8	42067	8 μ
37717	7	39130	7 μ	40829	9	42233	7
37770	8	39242	8 μ	40858	9	42324	8
37808	8 μ	39257	3	40987	8	42354	7 μ
37874	8 μ	39281	7	40990	8	42375	7 μ
37883	8 μ	39495	8	41006	9	42392	7 μ
37899	8 μ	39496	7	41009	8 μ	42552	8
37907	7 μ	39497	7 μ	41010	9	42564	8
37916	8 μ	39506	7 μ	41019	9	42577	8
37918	8 μ	39538	0	41029	8 μ	42606	7
37962	8	39564	8 μ	41035	9	42656	8
38036	8 μ	39619	7 μ	41039	7 μ	42694	7 μ
38156	7	39620	9	41067	8	42696	8 μ
38172	7 μ	39643	8 μ	41081	8	42740	8
38187	9	39646	8 μ	41085	8	42767	8 μ
38241	8 μ	39651	9	41115	8	42821	7
38285	6	39663	5 μ	41158	8 μ	42910	8
38288	7 μ	39667	8	41199	7	42939	7
38403	7 μ	39669	8 μ	41201	7	42985	8 μ
38414	8 μ	39670	8 μ	41204	8 μ	43023	8
38424	8	39687	8 μ	41254	8	43151	6

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No.	Mag.	No.	Mag.	No.	Mag.	No.	Mag.
43202	8μ	44003	8	45232	8	46678	6
43208	8μ	44018	9	45274	8	46686	8
43281	8	44035	7	45301	8	46792	8μ
43283	8μ	44062	9	45424	9	46906	6
Position incor.		44111	7	45488	8	46956	8
43402	8μ	44112	8μ	45517	8μ	47024	8μ
43414	7μ	44130	8μ	45624	8	47069	8μ
43448	7μ	44154	8	45684	8μ	47095	8μ
43464	9	44172	7	45766	9	47100	7
43484	8	44177	6μ	45771	7	47183	8
43504	7	44332	7μ	45822	8	47186	8μ
43505	7	44390	μ	45846	8	47207	7
43563	8μ	44534	6μ	45920	8μ	47216	7
43623	8	44753	6μ	45960	6μ	47222	9
43634	8	44869	9	46020	9	47232	7μ
43686	7μ	44904	7	46115	8μ	47251	7
43723	8	44911	8	46130	9	47259	7μ
43751	6μ	44917	7μ	46143	8μ	47287	7
43758	8μ	44933	8	46153	8	47301	9
43759	8μ	45016	8μ	46373	8μ	47316	7μ
43819	8μ	45092	5μ	46496	8	47349	8μ
43988	8	45162	7	46547	8	47368	8μ

"The many thousand errors which still remain to be corrected, so far as relates to the star-magnitudes in this Catalogue, would occupy too much space. This, however, may be effected by means of my Charts.

"*Driesen*, 1859, *June* 30."

Note from Capt. W. S. Jacob to the Editor.

"In my paper on *Jupiter's* Mass, lately printed in vol. xxviii. of the Society's *Memoirs*, there occurs a passage which Mr. Airy has pointed out to me as requiring correction. It is at p. 110, l. 18:—'My reason for not adopting Mr. Airy's epoch was, *that it was not apparent whether the light-equation was included in it or not.*' The portion in *italics* would read more correctly as follows: 'that I was not certain of the extent to which the light-equation had been included in it.'

"I was aware that the equation had been in some way taken into account, Mr. Airy having distinctly stated the fact in the paper referred to (*Mem. R. A. Soc.*, vol. vi., p. 91); but the term '*light-equation*' has not an invariable meaning, being sometimes taken as the whole interval occupied in the passage